IN THE CLAIMS

Please amend the claims as follows:

Claims 1-9 (Canceled).

Claim 10 (New): A method of estimating a downlink channel between a base station and a mobile terminal in a mobile telecommunication system, comprising:

estimating at the base station an uplink channel between the mobile terminal and the base station;

deducing, from variations in the estimated uplink channel, variations in a downlink channel;

making an initial estimation of the downlink channel at a first instant; and

estimating at a second instant the downlink channel from the initial estimation of the downlink channel at the first instant and the deduced variations in the downlink channel between the first and second instants.

Claim 11 (New): The estimation method according to Claim 10, wherein the initial estimation of the downlink channel is obtained by the mobile terminal and transmitted by the mobile terminal to the base station.

Claim 12 (New): A method of estimating a downlink channel between a base station and a mobile terminal in a mobile telecommunication system, comprising:

estimating at the base station an uplink channel between the mobile terminal and the base station;

deducing, from variations in the estimated uplink channel, variations in a downlink channel;

making an initial estimation of the downlink channel at a first instant; and

estimating at a second instant the downlink channel from the initial estimation of the downlink channel at the first instant and the deduced variations in the downlink channel between the first and second instants,

wherein the estimating the uplink channel comprises, for each propagation path (i) of the channel, estimating a first complex multiplicative coefficient (c_i^u) representing attenuation and phase rotation undergone by a signal at a first frequency (f_u) propagating on the path, and wherein the estimating the downlink channel comprises, for each of the same paths, estimating a second complex multiplicative coefficient (c_i^d) representing attenuation and phase rotation undergone by a signal at a second frequency (f) propagating on the path.

Claim 13 (New): The estimation method according to Claim 12, wherein the initial estimation of the downlink channel is obtained by the mobile terminal and transmitted by the mobile terminal to the base station.

Claim 14 (New): The method according to Claim 12, wherein, for a given path (i) and a given interval of time (Δt), variation in the second complex multiplicative coefficient (Δc_i^d) during the interval of time is calculated from the variation in the first complex multiplicative coefficient (Δc_i^u) during the said interval of time according to:
$\Delta c_i^d/c_i^d = f_d/f_u \cdot \Delta c_i^u/c_i^u$.

Claim 15 (New): The estimation method according to Claim 14, wherein the second complex multiplicative coefficients (c_i^d) of the different paths are obtained by adding over time their respective variations (Δc_i^d) and initial values ($c_i^d(0)$) transmitted by the mobile terminal.

Claim 16 (New): A method of estimating a downlink channel between a base station and a mobile terminal in a mobile telecommunication system, comprising:

estimating at the base station an uplink channel between the mobile terminal and the base station;

deducing, from variations in the estimated uplink channel, variations in a downlink channel;

making an initial estimation of the downlink channel at a first instant; and

estimating at a second instant the downlink channel from the initial estimation of the downlink channel at the first instant and the deduced variations in the downlink channel between the first and second instants,

wherein the estimating the uplink channel comprises, for each direction (θ_k) belonging to a plurality (N) of directions angularly sampling a zone served by the base station, estimating a first complex multiplicative coefficient (c_k^u) representing attenuation and phase rotation undergone by a signal at a first frequency (f_u), transmitted by the mobile terminal and arriving at the base station substantially in the direction, and wherein the estimating the downlink channel comprises, for each of the directions (θ_k), estimating a second complex multiplicative coefficient (c_k^d) representing attenuation and phase rotation undergone by a signal at a second frequency (f_d) transmitted by the base station in the direction to the mobile terminal.

Claim 17 (New): The estimation method according to Claim 16, wherein the initial estimation of the downlink channel is obtained by the mobile terminal and transmitted by the mobile terminal to the base station.

Claim 18 (New): The method according to Claim 16, wherein, for a given direction (θ_k) and a given interval of time (Δ_t), the variation in the second complex multiplicative coefficient (Δc_k^d) during the interval of time is calculated from the variation in the first complex multiplicative coefficient (Δc_k^u) during the said interval of time according to: $\Delta c_k^d / c_k^d = f_d / f_u \cdot \Delta c_k^u / c_k^u$.

Claim 19 (New): The method according to Claim 18, wherein the second complex multiplicative coefficients (c_k^d) in the different directions are obtained by adding over time their respective variations (Δc_k^d) and initial values ($c_k^d(0)$) transmitted by the mobile terminal.